

IN THE CLAIMS:

Please cancel claims 1 through 4 without prejudice or disclaimer.

5. (Amended) An RNA virus comprising a recombinant nucleic acid [~~—said recombinant-nucleic-acid-comprising-at-least-one-full-length-DNA-copy-or~~] selected from the group consisting of

an *in vitro*-transcribed RNA copy of an arterivirus genome and

an *in vitro*-transcribed RNA copy of the arterivirus genome lacking the genetic information encoding arterivirus envelope protein.

6. (Amended) A vaccine comprising a recombinant nucleic acid comprising at least one full-length DNA copy or *in vitro*-transcribed RNA copy of an RNA virus's genome, wherein the RNA virus's genome is greater than 15 kb.

7. (Amended) A cell culture with or transfected with a recombinant nucleic acid comprising at least one full-length DNA copy or *in vitro* transcribed RNA copy of an RNA virus's genome, wherein the RNA virus's genome is greater than 15 kb.

10. (Amended) A recombinant nucleic acid comprising an infectious clone based upon a positive strand RNA virus's genome, wherein the genome is at least about 15 kb, said infectious clone produced by a process comprising:

producing a recombinant nucleic acid comprising a nucleic acid sequence selected from the group consisting of an *in vitro*-transcribed RNA copy of the RNA virus's full length genome and DNA complementary to the RNA virus's full length genome.

11. (Twice amended) The RNA virus of claim 20 wherein the RNA virus is based on the genome of a virus of the order Nidovirales.

12. (Twice amended) The RNA virus of claim 11 wherein the infectious clone is based on a virus of the family Arteriviridae.

13. (Twice amended) The RNA virus of claim 12 wherein the virus is porcine reproductive and respiratory syndrome virus.

14. (Twice amended) The RNA virus of claim 20 wherein the infectious clone further comprises at least one nucleic acid sequence encoding a virulence marker and/or a serological marker particular to said positive strand RNA virus, and wherein said at least one nucleic acid sequence has been modified to effect a change in virulence and/or a change serological immune response.

15. (Twice amended) The RNA virus of claim 14 wherein the nucleic acid sequence encoding said virulence or serological marker or virulence and serological markers is located within any of the genome's open reading frames encoding structural viral proteins.

16. (Twice amended) The RNA virus of claim 20 wherein said infectious clone further comprises a nucleic acid sequence comprising at least one open reading frame and wherein said at least one open reading frame is substituted by an ORF7.

17. (Twice amended) The RNA virus of claim 20 wherein at least one additional heterologous nucleic acid sequence is inserted into the infectious clone, allowing the infectious clone to serve as a delivery system for an additional heterologous nucleic acid sequence.

18. (Twice amended) The RNA virus of claim 17 wherein said heterologous nucleic sequence encodes an antigen.

19. (Twice amended) The RNA virus of claim 20 wherein said infectious clone further comprises a nucleic acid sequence comprising at least one open reading frame, said at least one open reading frame having been modified to effect a change in virulence and/or a change in serological response in vivo in a cell into which the infectious clone has been introduced.

20. (Twice amended) An RNA virus based upon an RNA virus's genome, said RNA virus being of the type having a positive strand RNA and further having genetic information encoding at least one envelope protein, said genetically modified RNA virus produced by a process comprising:

transfecting a host cell with a recombinant nucleic acid comprising a nucleic acid sequence selected from the group consisting of an *in vitro*-transcribed RNA copy of the RNA virus's full length genome, an *in vitro*-transcribed RNA copy of the RNA virus genome but lacking the genetic information needed to produce enveloped, infectious RNA virus, DNA complementary to the RNA virus's full length genome, and DNA complementary to the RNA virus genome, but lacking genetic information needed to produce enveloped, infectious RNA virus; wherein the host cell is not susceptible to infection with said RNA virus, to produce said genetically modified RNA virus.

21. (Amended) A vaccine comprising the RNA virus of claim 20.

22. (Amended) A cell culture infected with the RNA virus of claim 20.

C2 conc'd.

Please add the following new claims:

25. (New) A DNA comprising nucleic acid selected from the group consisting of:
DNA complementary to a full length arterivirus genome and

DNA complementary to the arterivirus genome, but lacking genetic information encoding an envelope protein of said arterivirus.

26. (New) The DNA of claim 24 wherein said arterivirus is porcine reproductive respiratory syndrome.

27. (New) The genetically modified RNA virus of claim 20 wherein the host cell constitutively expresses at least one envelope protein of the RNA virus.

28. (New) A genetically modified RNA virus produced by a process of the type wherein a host cell is transfected with an infectious clone of an RNA virus to produce the genetically modified RNA virus, wherein the improvement comprises:

using, in said process, a host cell not susceptible to infection with said RNA virus to produce said genetically modified RNA virus, and rescuing the genetically modified virus therefrom.

29. (New) A recombinant nucleic acid comprising an infectious clone based upon a positive strand RNA virus's genome, wherein said RNA virus has at least one envelope protein, said infectious clone produced by a process comprising:

producing a recombinant nucleic acid comprising a nucleic acid sequence selected from the group consisting of an *in vitro*-transcribed RNA copy of the RNA virus's full length genome, an *in vitro*-transcribed RNA copy of the RNA virus genome but lacking the genetic information encoding the at least one envelope protein, DNA complementary to the RNA virus's full length genome, and DNA complementary to the RNA virus genome, but lacking genetic information encoding the at least one envelope protein.

30. (New) A composition for raising an immune response against a positive strand RNA virus's genome in a subject, wherein said positive strand RNA virus has at least one envelope protein, said composition comprising:

a recombinant nucleic acid sequence selected from the group consisting of

an *in vitro*-transcribed RNA copy of the positive strand RNA virus's full length genome,

an *in vitro*-transcribed RNA copy of the positive strand RNA virus genome, but lacking the genetic information encoding the at least one envelope protein,

DNA complementary to the positive strand RNA virus's full length genome, and

DNA complementary to the positive strand RNA virus genome, but lacking genetic information encoding the at least one envelope protein.

31. (New) A cell culture containing a positive strand RNA virus's genome, wherein said positive strand RNA virus has at least one envelope protein, said cell culture infected with or transfected with recombinant nucleic acid selected from the group consisting of

C3 cont'd
an *in vitro*-transcribed RNA copy of the positive strand RNA virus's full length genome,

an *in vitro*-transcribed RNA copy of the positive strand RNA virus genome, but lacking the genetic information encoding the at least one envelope protein,

DNA complementary to the positive strand RNA virus's full length genome, and

DNA complementary to the positive strand RNA virus genome, but lacking genetic information encoding the at least one envelope protein.
